

Amended Abstract

A method and apparatus are disclosed for improving bodily safety during exposure to a an eye hazardous monochromatic treatment light source by diverging the monochromatic light, such as with a highly durable diffuser diffusing unit attached to the light source distal end so that the radiance of the light exiting the distal end is an eye safe level. At a first position of the distal end of the monochromatic light source light source distal end substantially in contact with an outer surface of a target, the energy density of an exit beam from the distal end is substantially equal to the energy density of the monochromatic light required for desired applications suitable for effecting a desired treatment, and at a second non-contact position of the distal end the exit beam energy density the energy density of the light emitted therefrom is significantly less than a value suitable for effecting the treatment. In an additional embodiment, the diverging or diffusing unit has a device for evacuating vapors or particles from the target. the energy density of the monochromatic light. Accordingly, a laser unit suitable for aesthetic treatment, medical treatment or industrial treatment is converted into an eye safe laser unit. Eye safety is further enhanced by measuring the radiance of the divergent monochromatic light and issuing a warning as a result of a mishap if the radiance of the divergent monochromatic light is greater than a predetermined safe value, and if desired, generating a visible flash prior to the emission of a pulse of monochromatic light to induce an eye of a bystander to blink or to change its field of view in order to avoid staring at the monochromatic light.